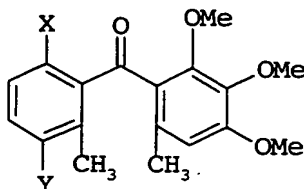


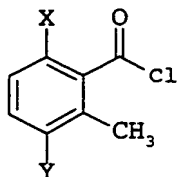
We claim:

1. A process for preparing benzophenones of the formula I,



I

where X may be chlorine, hydroxyl, methoxy or C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyloxy, and Y may be chlorine or bromine, by reacting an acid chloride of the formula II



II

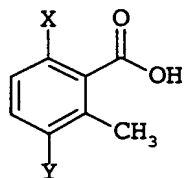
where X and Y are as defined above with 3,4,5-trimethoxytoluene, which comprises carrying out the reaction in the presence of

- a) an aromatic hydrocarbon selected from the group of: chlorobenzene, benzotrifluoride and nitrobenzene as a diluent and
  - b) from 0.01 to 0.2 mol% of an iron catalyst, based on the acid chloride,
  - c) at a temperature between 60°C and the boiling point of the particular diluent.
2. A process as claimed in claim 1, wherein the diluent used is chlorobenzene.
3. A process as claimed in claim 1 or 2, wherein 3,4,5-trimethoxytoluene is initially charged, optionally in the particular diluent, and the acid chloride together with the iron catalyst is metered in, optionally in the particular diluent.

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4. A process as claimed in any of claims 1 to 3, wherein the hydrochloric acid forming in the reaction is removed from the reaction mixture by stripping using an inert gas stream.
- 5 5. A process as claimed in any of claims 1 to 4, wherein the diluent is distilled off toward the end or during the course of the reaction, and the remaining product melt is crystallized in a C<sub>1</sub>-C<sub>6</sub>-alcohol.
- 10 6. A process as claimed in any of claims 1 to 5, wherein the acid chloride of the formula II is prepared by reacting an acid of the formula III

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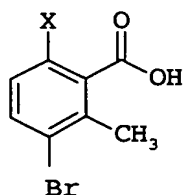
III

- 20 where X and Y are each as defined above with thionyl chloride or phosgene, optionally in the presence of dimethylformamide, in the same diluent which is also used in the subsequent Friedel-Crafts stage.

- 25 7. A process as claimed in claim 6, wherein, after formation of the acid chloride II, at least a portion of the diluent is distilled off with excess thionyl chloride and recycled into the process.

- 30 8. A process as claimed in claim 6, wherein the acid of the formula IIIa

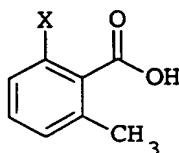
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IIIa

is prepared by brominating the compound IV

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IV

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with elemental bromine in the same diluent which is also used in the two subsequent stages.

9. A process as claimed in claim 8, wherein at least a portion  
5 of the diluent and excess bromine is distilled off at the end of the bromination and recycled into the process.

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